

ARIZONA CWCS ELEMENT GUIDE (ROAD MAP)

This guide is provided for the National Advisory Acceptance Team for the purpose of evaluating Arizona's Comprehensive Wildlife Conservation Strategy (CWCS or Strategy) in addressing the 8 required elements.

Arizona's CWCS is described in 3 documents:

- **CWCS 2005-2015** (the Core Plan) – essentially the executive summary of the plan, which includes the list of priority conservation strategies and information needs to be implemented over the next 10 years.
- **PROCESSES** (Companion Document A) – a synthesis of the methods and processes used in developing the CWCS. This document provides details on: development teams used, participation by land managers and constituents, the 10-year revision process, the multi-scale approach to conservation, criteria used to identify priority species (“Wildlife of Greatest Conservation Need”), evaluating important stressors/threats to wildlife resources, identifying key habitats for conservation, developing conservation strategies and information needs that address important stressors/threats, adaptive management and monitoring efforts needed, database resources for tracking and reporting progress, and recommended partners to implement strategies in the CWCS.
- **STATE OF THE STATE** (Companion Document B) – a “snapshot” or summary of current conditions of Arizona's landscapes, status of priority wildlife, and important stressors/threats affecting wildlife resources. This document contains the list of CWCS priority wildlife (“Wildlife of Greatest Conservation Need”) and a separate list of wildlife that are lacking sufficient information on their population status to determine their vulnerability or active management needs.

Arizona's CWCS Core Plan, Processes, and State of the State documents are also available through the Arizona Game and Fish Department's website (http://www.azgfd.gov/w_c/cwcs.shtml) as Adobe PDF files. Additional supporting material to the CWCS is also available from the Department's website at these links:

- Priority species abstracts: http://www.azgfd.gov/w_c/edits/species_concern.shtml (Heritage Database Management System)
- Wildlife Summit and online survey reports: http://www.azgfd.gov/w_c/cwcs_format.shtml
- Analysis of selected habitat types by The Nature Conservancy: http://www.azgfd.gov/w_c/cwcs_format.shtml
- Ecoregional assessment results for Arizona by The Nature Conservancy: http://www.azgfd.gov/w_c/cwcs_format.shtml

Throughout each document, tables and appendices are labeled with capital letters and figures are numbered. Please refer to the following page numbers in order to examine how each required element was addressed in the development of the Strategy.

Element 1: Information on the distribution and abundance of species of wildlife, including low and declining populations as the state deems appropriate, that are indicative of the diversity and health of the state's wildlife:						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
A. The Strategy indicates sources of information (e.g., literature, data bases, agencies, individuals) on wildlife abundance and distribution consulted during the planning process.	Core Plan	5-7	-	-	-	-
	Processes	2, 4-6, 10-15	-	-	B	40-41
B. The Strategy includes information about both abundance and distribution for species in all major groups to the extent that data are available. There are plans for acquiring information about species for which adequate abundance and/or distribution information is unavailable.	Core Plan	-	E	15	-	-
	Processes	13-15	-	-	-	-
C. The Strategy identifies low and declining populations to the extent data are available.	State of the State	-	-	-	A	25-53
D. All major groups of wildlife have been considered or an explanation is provided as to why they were not (e.g., including reference to implemented marine fisheries management plans). The State may indicate whether these groups are to be included in a future Strategy revision.	Processes	11-15	-	-	-	-
	State of the State	15-17	D, E	15, 16	A, B	25-53, 54-59
E. The Strategy describes the process used to select the species in greatest need of conservation. The quantity of information in the Strategy is determined by the State with input from its partners, based on what is available to the State.	Core Plan	5-7	A, B	6, 7	-	-
	Processes	11-15	D	13	D	43-52
	State of the State	15-17	-	-	-	-

Note: The Department maintains wildlife species abstracts in the Heritage Database Management System (HDMS; Arizona's Natural Heritage Program that is part of the NatureServe global network). These abstracts contain information on species abundance and distribution. A majority of these abstracts are available to the public as PDF files linked to the Department's website. As new survey data or published information becomes available, existing abstracts are updated or new abstracts are created and added to the system. Rather than provide summaries of priority species' abundance and distribution in the CWCS plan (some which are likely to become outdated after the plan is printed), the Department decided to reference this information from the HDMS abstracts. A website-based resource has the advantage of being publicly accessible and continually updated and expanded over time.

The HDMS contains 194 abstracts of CWCS priority species (or 30% of the total 647 priority species identified in Arizona's CWCS). Updating and increasing the number of abstracts for priority species is one of the goals under information needs for the CWCS in the upcoming years.

Element 2: Descriptions of locations and relative condition of key habitats and community types essential to conservation of species identified in (1):						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
A. The Strategy provides a reasonable explanation for the level of detail provided; if insufficient, the Strategy identifies the types of future actions that will be taken to obtain the information.	Core Plan	7-8	1, 2	9, 10	-	-
	Processes	15, 21-24	3, 4	22, 23	-	-
	State of the State	1-15	A, B	3, 4	-	-
B. Key habitats and their relative conditions are described in enough detail such that the State can determine where (i.e., in which regions, watersheds, or landscapes within the State) and what conservation actions need to take place.	Core Plan	16-19	3, 4	17, 18	-	-
	Processes	21-24	3, 4	22, 23	-	-
	State of the State	3-15	-	-	-	-

Note: Given the tight timeframes for developing the CWCS and limited resources available (in both personnel and GIS layers of wildlife distributions and habitat conditions), the Department did not conduct a statewide comprehensive habitat analysis for the CWCS. Instead, the Department is relying on two independent studies as proxies to a comprehensive analysis: 1) the 147 conservation priority areas identified in previous ecoregional assessments (by The Nature Conservancy, the Department, and multiple cooperators); and 2) wildlife movement corridors and core habitat areas identified in the recent Arizona Wildlife Habitat Linkages effort (by Arizona Department of Transportation, the Department, and other cooperators). Both of these habitat analyses offer valuable insights into the status and distribution of key habitats for wildlife based on different criteria (that is: various measurements of biodiversity, connectivity or fragmentation of habitats, and/or land management practices). Together, these efforts highlight “landscapes and biotic communities of greatest conservation need” for implementing strategies on habitat restoration and improvement for wildlife. For example, grasslands and wetland/riparian areas in Arizona are at high risk of habitat conversion, degradation, and/or fragmentation, and these habitats are of critical importance to large assemblages of wildlife (both aquatic and terrestrial).

Element 3: Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats:						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
A. The Strategy indicates sources of information (e.g., literature, databases, agencies, or individuals) used to determine the problems or threats.	Core Plan	11-12	C	12	-	-
	Processes	15-20	F, G	16, 18	-	-
B. The threats/problems are described in sufficient detail to develop focused conservation actions (for example, “increased highway mortalities” or “acid mine drainage” rather than generic descriptions such as “development” or “poor water quality”).	Processes	15-20	F, G	16, 18	F, G	56, 57-62
	State of the State	17-20	F	19-20	-	-

Element 3: Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats:						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
C. The Strategy considers threats/problems, regardless of their origins (local, State, regional, national and international), where relevant to the State's species and habitats.	State of the State	17-20	F	19-20	-	-
	Processes	15-20	-	-	-	-
D. If available information is insufficient to describe threats/problems, research and survey efforts are identified to obtain needed information.	Core Plan	15	E	15	-	-
	Processes	13-15, 27	D	13	-	-
E. The priority research and survey needs, and resulting products, are described sufficiently to allow for the development of research and survey projects after the Strategy is approved.	Core Plan	15, 19-22	-	-	-	-
	Processes	26-30	-	-	-	-

Note: The results of the threat assessment in Arizona's CWCS are summarized at the ecoregion spatial scale within the plan. However, the assessment itself was incredibly complex (up to 72 specific stressors ranked across 4 scoring variables: magnitude, urgency, reversibility, and knowledge) and provided evaluations down to the landscape level (that is: 14 vegetative communities and 3 riparian/aquatic systems among 6 ecoregions). While each ecoregion varied in the types and numbers of landscapes and applicable stressors, the Department and its external partners in the CWCS Ecoregion Workgroup completed 24 threat matrices containing 14,400 cells.

The assessment followed the conceptual design and conventions proposed by the Conservation Measures Partnership (by Salafsky and others) and those used by the Minnesota Department of Natural Resources in their CWCS. When scores of important stressors/threats were analyzed, the Department found that many stressors were occurring statewide or among a majority of the ecoregions. The completed threat matrices are archived on Microsoft Excel spreadsheets. The threat assessment became the "springboard" for helping complete other major components of the CWCS, notably conservation strategies and information needs.

Element 4: Descriptions of conservation actions determined to be necessary to conserve the identified species and habitats and priorities for implementing such actions:						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
A. The Strategy identifies how conservation actions address identified threats to species of greatest conservation need and their habitats.	Core Plan	12-15	D	13-14	-	-
	Processes	19-20	-	-	G	57-62
B. The Strategy describes conservation actions sufficiently to guide implementation of those actions through the development and execution of specific projects and programs.	Core Plan	12-15, 19-22	D	13-14	-	-
	Processes	24-30	-	-	I	68-71

Element 4: Descriptions of conservation actions determined to be necessary to conserve the identified species and habitats and priorities for implementing such actions:						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
C. The Strategy links conservation actions to objectives and indicators that will facilitate monitoring and performance measurement of those conservation actions (outlined in Element #5).	Core Plan	19-22	-	-	-	-
	Processes	26-30	-	-	-	-
D. The Strategy describes conservation actions (where relevant to the State's species and habitats) that could be addressed by Federal agencies or regional, national or international partners and shared with other States.	Processes	28-29	-	-	H	63-67
E. If available information is insufficient to describe needed conservation actions, the Strategy identifies research or survey needs for obtaining information to develop specific conservation actions.	Core Plan	15	E	15	-	-
F. The Strategy identifies the relative priority of conservation actions.	Core Plan	12-15	D	13-14	-	-
	Processes	24-29	-	-	-	-

Note: The Department and its external partners in the Ecoregion Workgroup brainstormed hundreds of potential conservation actions and opportunities as a prelude to developing conceptual models of pathways and effects of 40 of the most important stressors/threats to Arizona's wildlife resources. This effort also identified affected ecoregions (indicating terrestrial and/or aquatic habitats), real or potential obstacles to implement actions, and likely key partners to implement conservation actions. From this large set of suggestions, Department staff rolled up similar actions and opportunities into categorical groups (= 'emphasis' column of Table D and E in the CWCS Core Plan) to identify strategic-level conservation strategies and information needs. Each of these strategies and information needs are considered first-tier priorities and reflect "big picture" goals for conservation of wildlife and wildlife habitat. More refined and site-specific conservation actions and monitoring needs are identified in numerous operational plans (that is: recovery plans, conservation agreements, Safe Harbor Agreements, Habitat Conservation Plans, agency and local government resource management plans, non-government organization land management proposals, memorandums of understanding, etc).

The Department intends to use the CWCS as a bridge between strategic-level goals and fine-scale operational actions. In Arizona, there are many fine resources from which the CWCS can build on (for example: Pima County's Sonoran Desert Conservation Plan, the All Birds Conservation Initiative, or the Arizona Bat Conservation Plan) or function as a nexus to project funding among conservation partners.

Element 5: Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions:						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
A. The Strategy describes plans for monitoring species identified in Element #1, and their habitats.	Core Plan	19-22	E	15	-	-
	Processes	24-30	-	-	-	-
B. The Strategy describes how the outcomes of the conservation actions will be monitored.	Core Plan	19-22	-	-	-	-
	Processes	24-30	-	-	-	-
C. If monitoring is not identified for a species or species group, the Strategy explains why it is not appropriate, necessary or possible.	Processes	24-30	-	-	-	-
D. Monitoring is to be accomplished at one of several levels including individual species, guilds, or natural communities.	Core Plan	21-22	E	15	-	-
	Processes	25-28	-	-	-	-
E. The monitoring utilizes or builds on existing monitoring and survey systems or explains how information will be obtained to determine the effectiveness of conservation actions.	Core Plan	20-21	-	-	-	-
	Processes	25-30	-	-	-	-
F. The monitoring considers the appropriate geographic scale to evaluate the status of species or species groups and the effectiveness of conservation actions.	Core Plan	21-22	E	15	-	-
	Processes	25-28	-	-	-	-
G. The Strategy is adaptive in that it allows for evaluating conservation actions and implementing new actions accordingly.	Core Plan	21-22	-	-	-	-
	Processes	25-29	-	-	-	-

Note: While the first iteration of Arizona’s CWCS does not include detailed metrics for each of the 60 conservation strategies and information needs (and 647 priority species), it does offer a subset of performance measures adapted from the Partners in Flight North American Landbird Conservation Plan that can be applied to CWCS goals. These examples, and in coordination with existing monitoring programs nationally, regionally, and locally (as referenced in the Core Plan and Processes documents), will provide guidance to the Department and its external partners in the Ecoregion Workgroup to establish measurable objectives under an adaptive management framework. The associated databases that the Department will be using to track and report progress on CWCS activities will help managers oversee monitoring of strategic-level goals and actions, as well as provide a valuable information resource in project planning.

Element 6: Descriptions of procedures to review the Strategy at intervals not to exceed 10 years:						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
A. The State describes the process that will be used to review the Strategy within the next 10 years.	Core Plan	22-23	F	22	-	-
	Processes	3, 29-30	A	3	-	-

Note: The 10-year revision process for Arizona's CWCS was designed to operate within an adaptive management framework and the Department's existing budget cycle. With intervals of 2 years between internal reviews, the Department may observe some species or habitat responses (or trends) to management activities during these relatively short time periods. Under an experimental design, changes to management activities may offer corrective results to situations that benefit wildlife populations or habitats. Evaluations of survey data and project needs at the beginning of each 2-year budget cycle allow agency staff to plan for new information needs or specific projects as priorities or conditions change.

Element 7: Plans for coordinating, to the extent feasible, the development, implementation, review, and revision of the Strategy with Federal, State, and local agencies and Indian tribes that manage significant land and water areas within the state or administer programs that significantly affect the conservation of identified species and habitats:						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
A. The State describes the extent of its coordination with and efforts to involve Federal, State and local agencies, and Indian Tribes in the development of its Strategy.	Core Plan	4-5	-	-	-	-
	Processes	2, 4-6, 15, 18, 21-30	B, 4	4, 23	B, C	40-42
B. The State describes its continued coordination with these agencies and tribes in the implementation, review and revision of its Strategy.	Core Plan	19-23	F	22	-	-
	Processes	3, 24-29	A	3	H	63-67

Note: In developing Arizona's CWCS, the Department reached out to involve as many land management and resource regulatory agencies and tribes through Ecoregion Workgroup meetings and Wildlife Summit workshops. One measure of success that is not captured in this evaluation is the tangible benefits of increased understanding and communication of issues, ideas, values, perceptions, and priorities among involved stakeholders and agency staff. Arizona's CWCS reflects a widespread involvement and support by numerous federal, state, tribal, and local government entities, non-government organizations, user groups, and special interests. Evidenced by public comments and correspondence, many stakeholders see the promise that the CWCS offers to conserving wildlife and wildlife habitats, and are now advocating this comprehensive and cooperative effort to others. Arizona's CWCS development effort has succeeded in improving communication, sharing information, designing strategic-level goals, and setting the groundwork for better cooperation among conservation partners.

Element 8: Provisions to ensure public participation in the development, revision, and implementation of projects and programs. Congress has affirmed that broad public participation is an essential element of this process:						
NAAT Guidance	Document	Pages	Table or Figure	Pages	Appendix	Pages
A. The State describes the extent of its efforts to involve the public in the development of its Strategy.	Core Plan	4-5	-	-	-	-
	Processes	4-6	B	4	A	37-39
B. The State describes its continued public involvement in the implementation and revision of its Strategy.	Core Plan	19-23	F	22	-	-
	Processes	3	A	3	H	63-67

Acknowledgments: Our thanks to North Dakota Game and Fish Department for sharing their CWCS “road map” template, which we have modified and used here for Arizona’s CWCS. We greatly appreciate the support and involvement that the Teaming With Wildlife folks, the Development Assistance Team advisors, and National Advisory Acceptance Team evaluators have provided at both the national and regional levels for the CWCS.

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